

AMENDMENTS TO THE CLAIMS

1. (currently amended) An isolated A-bioinformatically-detectable novel human gene encoding ~~substantially pure DNA wherein: RNA encoded by said bioinformatically detectable novel gene is about 18 to about 24 nucleotides in length, and originates from an RNA precursor, which RNA precursor is of about 50 to about 120 nucleotides, in length; a nucleotide sequence of wherein a first portion of the RNA of 18 to 24 nucleotides is at least 50% complementary to a second portion of the RNA sequence of 18 to 24 nucleotides, a first half of said RNA precursor is a partial inversed-reversed sequence of a nucleotide sequence of a second half thereof; and wherein at least one of the first or second portion of the RNA is at least 50% complementary to a binding site sequence of 18 to 24 nucleotides of a target human gene~~ a nucleotide sequence of said RNA encoded by said novel gene is a partial inversed-reversed sequence of a nucleotide sequence of a binding site associated with at least one target gene; said novel gene cannot be detected by either of the following: a visually discernable whole body phenotype; and detection of 99.9% of RNA species shorter than 25 nucleotides expressed in a tissue sample; and a function of said novel gene is bioinformatically deducible.

2. (currently amended) An isolated A-bioinformatically-detectable novel human gene comprising encoding substantially pure DNA wherein: RNA encoded by said bioinformatically-detectable novel gene comprises a plurality of genes according to claim 1 RNA sections, each of said RNA sections being about 50 to about 120 nucleotides in length, and comprising an RNA segment, which RNA segment is about 18 to about 24 nucleotides in length; a nucleotide sequence of a first half of each of said RNA sections encoded by said novel gene is a partial inversed-reversed sequence of nucleotide sequence of a second half thereof; a nucleotide sequence of each of said RNA segments encoded by said novel gene is a partial inversed-reversed sequence of the nucleotide sequence of a binding site associated with at least one target gene; and a function of said novel gene is bioinformatically deducible from the following data elements: said nucleotide sequence of said RNA encoded by said novel gene, a nucleotide sequence of said at least one target gene, and function of said at least one target gene.

3. (canceled)

4. (currently amended) ~~The gene of claim 1, wherein said A bioinformatically detectable novel gene encoding substantially pure DNA wherein: said bioinformatically detectable novel gene does not encode a protein; RNA encoded by said bioinformatically detectable novel gene is maternally transferred by a cell to at least one daughter cell of said cell; a function of said novel gene comprises modulation of a cell type of said daughter cell; and said modulation is bioinformatically deducible.~~

5. (currently amended) ~~The gene of claim 1, wherein expression of said A bioinformatically detectable novel gene encoding substantially pure DNA wherein: said bioinformatically detectable novel gene does not encode a protein; a function of said novel gene is capable of promoting promotion of expression of said at least one target gene; and said at least one target gene is bioinformatically deducible.~~

6. (canceled)

7. (currently amended) ~~A bioinformatically detectable novel The gene according to claim 1 and wherein said encoded RNA encoded by said novel gene complementarily binds said binding site associated with said at least one target gene, thereby is capable of modulating expression of said at least one target gene.~~

8. (currently amended) ~~A bioinformatically detectable novel The gene according to claim 1 and wherein[[:]] said binding site sequence associated with at least one target gene is located in an untranslated region of RNA encoded by said at least one target gene.~~

9. (currently amended) ~~A bioinformatically detectable novel gene according to claim 7 and wherein: said function of said novel gene is selective inhibition of translation of said at least one target gene, which selective inhibition comprises complementary hybridization of said RNA encoded by said novel gene to said binding site The gene according to claim 8 wherein the binding site sequence is located in the 3'untranslated region of the RNA encoded by said target human gene..~~

10. (currently amended) A vector comprising the ~~DNA~~ gene of claim 1.

11. (withdrawn) A method of selectively inhibiting translation of at least one gene, comprising introducing the vector of claim 10 into a cell.

12. (withdrawn) A method according to claim 11 and wherein said introducing comprises utilizing RNAi pathway.

13. (currently amended) A gene expression inhibition system comprising[[:]] the vector of claim 10[[;]] and a means for inserting ~~vector inserter, functional to insert~~ said vector ~~of claim 10~~ into a cell, ~~thereby selectively inhibiting translation of at least one gene.~~

14. (currently amended) A probe comprising the ~~DNA~~ gene of claim 1.

15. (withdrawn) A method of selectively detecting expression of at least one gene, comprising using the probe of claim 14.

16. (original) A gene expression detection system comprising: the probe of claim 14; and a gene expression detector functional to selectively detect expression of at least one gene.